TOWING MIRRORS
FITTING INSTRUCTIONS

AUSTRALIAN OWNED AND OPERATED SINCE 2000

PRADO 150 SERIES 2009-07/2024

POWER FOLD **TM550 - TM555**
NON POWER FOLD **TM500 - TM505**



MSA 4X4 ACCESSORIES

GEAR FOR **LIFE**

5 YEAR WARRANTY

CERTIFIED ADR COMPLIANT

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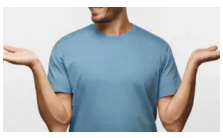
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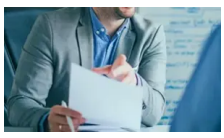
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CONGRATULATIONS

ON PURCHASING A QUALITY SET OF MSA 4X4 TOWING MIRRORS!



MSA 4X4 Towing Mirrors are simple to fit as they mount onto the vehicle door in the same position as the existing mirrors, using existing holes and wiring.

Getting Started:
Here's what comes inside the box:

- **1 x** Left hand side mirror
- **1 x** Right hand side mirror
- **1 x** Complete fitting kit
- **1 x** Installation instructions

If anything is missing, please contact us via:
warranties@msa4x4.com.au

IMPORTANT INFORMATION

WHAT TO KNOW BEFORE INSTALLING MSA 4X4 TOWING MIRRORS:

MSA 4X4 Towing Mirrors are labelled 'Left' and 'Right', on the packaging and on the mirror bases. The Left mirror is installed on the Passenger's side and the Right mirror is installed on the Driver's side.

RECOMMENDED TOOLS FOR INSTALLATION

- PHILLIPS HEAD & FLATHEAD SCREWDRIVER
- SMALL RATCHET WITH 10MM SOCKET WITH EXTENSION BAR
- TRIM PANEL REMOVAL TOOLS
- TORQUE WRENCH
- TAPE MEASURE
- MASKING TAPE
- T6 TORX BIT



Image for illustration purposes only.

INSTALL STEPS

1 PREPARE THE VEHICLE

Position the vehicle on flat ground with at least 1 metre of clear space on all sides.

Measure a box, 300mm away from and all around the vehicle (50mm masking tape is recommended). Ensure that the lines are perpendicular with the vehicle and meet at 90˚angles in the corners. This will help when realigning the cameras in the **MSA Towing Mirrors** after installation. Turn on the vehicles camera function. The lines must be visible from the vehicles' 360° camera view. Adjust if required.

PLEASE NOTE

DO NOT MOVE THE VEHICLE UNTIL THE MSA MIRRORS HAVE BEEN INSTALLED AND THE CAMERAS HAVE BEEN RE-ADJUSTED.

TIP

TAKE A PHOTO OF THE 360' CAMERA VIEW PRIOR TO REMOVAL OF THE MIRRORS FOR REFERENCE WHEN READJUSTING THE MSA MIRRORS.



Image for illustration purposes only.



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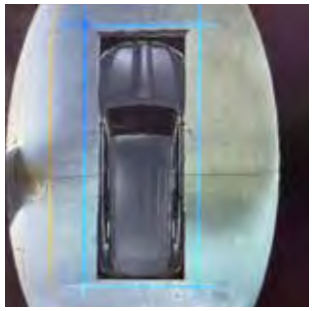


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2 REMOVING THE FACTORY MIRROR

Remove the interior door trims and the original factory fitted mirrors as per the vehicle manufacturer's instructions. Assistance, holding the mirror during the removal process may be required to avoid any accidental damage to the original mirrors and/or the vehicle.

Retain and secure the nuts and/or bolts with the original factory mirrors. They will not be required to install the new **MSA Towing Mirrors** on this model vehicle. However they will be required if reinstalling is ever required.

Trace the wires from the original mirror, located in the vehicle's door, and disconnect any connected plugs. Follow this same route when installing the new **MSA Towing Mirrors.** Taking a photo of the original wire positioning before disconnecting may be helpful.

PLEASE NOTE

SOME AFTERMARKET WIND DEFLECTORS FITTED WITH THE ORIGINAL MIRRORS MAY AFFECT THE NEW MIRROR INSTALLATION PROCESS. IF SO REMOVE THEM, MODIFY AND REFIT AFTER THE MIRROR INSTALLATION IS COMPLETED.







MSA TOWING MIRRORS

PLEASE NOTE

DISMANTLING THE FACTORY MIRRORS, REMOVING THE SIDE MIRROR CAMERAS AND INSTALLING THEM INTO THE MSA TOWING MIRRORS, WILL BE REQUIRED FOR THE CAMERA FEATURE TO WORK ON THIS MIRROR MODEL.

3 REMOVING THE FACTORY CAMERA

Prior to dismantling the factory mirror, use a white pencil, or similar, to mark the orientation of the camera lens. Make a small mark pointing away from the vehicle. This will help with aligning the camera in the correct orientation in the **MSA Towing Mirror.**

TIP

START FROM THE CORNER CLOSEST TO THE MIRROR BASE AND WORK YOUR WAY AROUND THE MIRROR CAP.





PLEASE NOTE

THE 2 SMALL SCREWS ARE REQUIRED TO ATTACH THE CAMERA TO THE CAMERA BRACKET IN THE MSA TOWING MIRRORS, SO BE SURE NOT TO LOSE THEM.

Place the mirror on a bench or stable non-slip surface. Be careful not to damage or scratch the factory mirror. Remove the mirror cap, using a trim removal tool and set aside.

Be careful to separate the left hand side *(passenger side)* and right hand side *(driver side)* cameras. As the left hand side camera will be installed into the left hand side **MSA Towing Mirror** and the right hand side camera will be installed into the right hand side **MSA Towing Mirror**.













INSTALL STEPS

4 INSTALLING THE TOWING MIRRORS

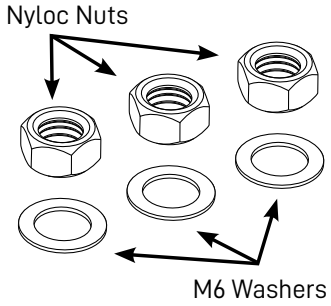
Assistance, holding the mirror during the installation process may be required to avoid any accidental damage to the new **MSA Towing Mirrors** and/or the vehicle.

Use the supplied **Nylon Nuts** and **Flat Washers** to secure the **MSA Towing Mirrors** into place. From the outside align the pre fixed studs on the mirror with the original bolt holes in the vehicle door. Pass the studs through the holes and attach the **Flat Washers** and **Nylon Nuts.** Secure the nuts about half way up the thread.

After all the bolts have been started, double check the rubber surrounding the door is not caught under the mirror base and the rubber seal provided is sitting flush against the mirror and door frame.

Finally, secure and tighten all the bolts to 8nm.

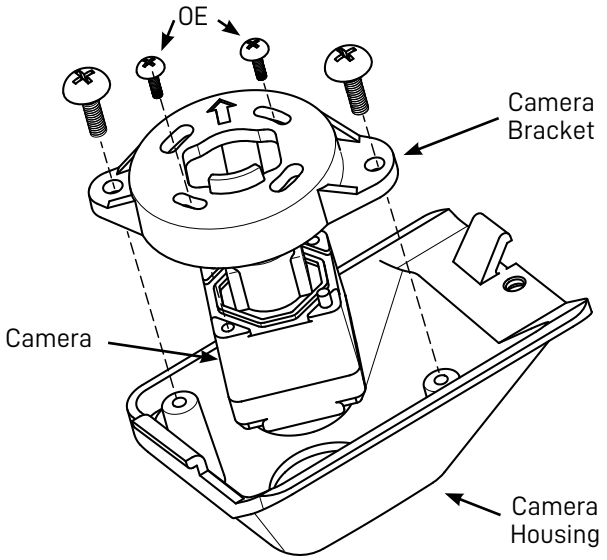






5 INSTALLING THE CAMERAS

The **Camera Bracket** and **Housing** are supplied separately from the **Towing Mirror**. Ensure the left hand side camera goes with the left hand side **Camera Bracket** and **Housing**. Using the 2 original equipment (OE) small screws, install the **Camera** into the **Camera Bracket.** Place the **Camera** and **Bracket** in the same orientation as the factory mirror and place into the **Camera Housing.** Once the **Camera** orientation is correct, screw the **Bracket** and **Housing** together. Plug the **Camera** into the plug and clip the **Camera Housing** into the **MSA Towing Mirror**. Repeat for the other side.









MSA TOWING MIRRORS

6 PLUG & PLAY



MSA Towing Mirrors are supplied with a plug and play loom that plugs directly into the original plugs located in vehicle door. Run the **MSA Towing Mirror** wire in the same way as the original one, secure this wire and plug together, it will only go in one way. Please ensure this clicks firmly into place.

TIP

ENSURE THAT YOU RUN ANY EXCESS IN THE WIRE IN SUCH A WAY THAT IT DOES NOT GET CAUGHT UP OR DAMAGED BEHIND THE DOOR PANEL.

6 ALIGNING THE CAMERA

Now that the cameras are installed and the **MSA Towing Mirrors** are installed into the vehicle. Close the doors and turn on the vehicles 360 view *(refer to user manual)*. Check that the box laid out on the floor at the beginning is still parallel to the vehicle. If the lines are not parallel, the **Camera Bracket** can be adjusted to correct the alignment. If the alignment is correct, skip the next step and proceed to re-installing the door trims.

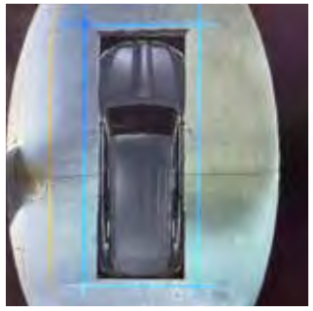


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8 ADJUSTING THE CAMERA

With a small flathead screwdriver, pop the **Camera Housing** out of the mirror. Loosen the 2 inner screws holding the **Camera Bracket** in. Adjust the camera by rotating the camera clockwise or anti-clockwise to suit the drivers viewing preference. Tighten the 2 inner screws, plug the camera back in, clip the **Camera Housing** back into place and check the 360° view. Repeat this process until a satisfactory result is achieved. Secure the **Camera Housing** into the **Towing Mirror** with the supplied screw.









INSTALL STEPS

9 FURTHER CAMERA ADJUSTMENT



If further adjustment is required, follow the steps below to access the vehicles multi-media display management system.

1 Turn vehicle onto ignition

2. Press the **'MENU'** button on the head unit.





3. Press **'Display'** on the multimedia screen.

4. Press **'Screen Off'** on the multimedia screen.

5. Press **'CH>'** 5 x times, followed by **'<TRACK'** 5 x times. The service menu show display.





6. Press **'Function Check/Setting'**.

7. Press **'Camera Setting'**.

8. Press and hold **'View Adjustment'**. *(This will be grey. Pressing and holding will override this).*





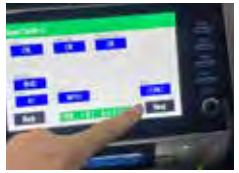
9. Press **'Next'**.

10. Use the camera adjustment menu to further adjust the cameras into position. When complete, press **'OK'**.

11. Turn vehicle off.









10 RE-INSTALLING DOOR TRIMS

Re-install the door trim, as per manufacturer's instructions.

PLEASE NOTE

CHECK YOUR MIRROR HAS COMPLETE FUNCTION PRIOR TO FINAL RE-INSTALLATION OF THE DOOR TRIMS.

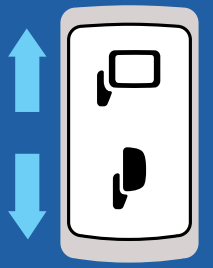
11 LET'S GO!

Adjust the mirrors to suit to the driver's viewing angle and preferences. The vertical and horizontal adjustments cater to drivers of differing heights and seated positions.

When rotating the mirror into the horizontal position, the mirror's actuator automatically adapts, allowing the mirror to retain the standard adjustments *(up, down, side to side)* from the vehicle's standard mirror adjuster.

PLEASE NOTE

FOR POWER FOLD MODELS, THE MIRROR HEAD MAY BE LOOSE BEFORE INSTALLATION. THE MIRROR HEAD NEEDS TO BE ELECTRONICALLY FOLDED AND UNFOLDED, A MINIMUM OF X3 TIMES, AFTER THE MIRRORS ARE INSTALLED TO HELP SYNCHRONISE.



MIRROR FOLD CONTROLLER

WORKS WITH THE ORIGINAL FOLD IN AND OUT SWITCH

AS A SAFETY FEATURE THESE MIRRORS ARE DESIGNED TO MANUALLY FOLD INWARDS IF THEY COME INTO CONTACT WITH OBJECTS OUTSIDE THE CAR. PLEASE AVOID UNNECESSARY MANUAL FOLDING OF THE MIRRORS, AS IT CAN PREMATURELY WEAR DOWN THE GEAR SET WITHIN THE MOTOR.


MSA 4X4

FITTED MIRROR DIMENSIONS



POSITION 1

Fit into garages and tight parking spaces



POSITION 2

Perfect for towing camper trailers, horse floats and smaller vans



POSITION 3

Perfect for tray backs and wider service bodies



POSITION 4

Perfect for towing large vans or wider loads

		Non Power Fold	Power Fold
4	Towing Extended Position	**2530**mm	**2550**mm
3	Standard Horizontal Position	**2380**mm	**2423**mm
2	Standard Driving Extended	**2310**mm	**2335**mm
1	Standard Driving Position	**2160**mm	**2210**mm
	Folded Position	**2055**mm	
	Factory Mirror Driving Position	**2190**mm	



PLEASE NOTE

ALL DIMENSIONS ARE TAKEN FROM THE WIDEST PART OF THE MIRROR BODY ON THAT POSITION.

MSA 4X4 WARRANTY





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Arundel QLD, 4214

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PHONE:
+61 7 5594 6664

EMAIL:
warranties@msa4x4.com.au

WEBSITE:
msa4x4.com.au

All MSA 4X4 Accessories products are designed and manufactured to the highest quality standards to perform as they should. We stand behind our Driving Mirrors with a 5-year Manufacturer's Warranty.

All claims under this warranty should be made by returning the product at your cost to MSA 4X4 Accessories Pty Ltd, 43 Harrington Street, Arundel, QLD 4214, with the detail of the fault, proof of purchase, proof of identification and vehicle fitment details where relevant. 5-year manufacturer's warranty applies to the original purchaser only.

If we determine that an MSA 4X4 Towing Mirror is defective in materials or workmanship during the 5-year Warranty, we will either repair or replace the product. Repair or replacement is solely at the discretion of MSA 4X4 Accessories Pty Ltd.

This warranty does not apply to failure or damage caused by incorrect or faulty fitment, accidental or intentional damage, misuse or abuse, failure of other products, operation of the product outside of its environmental or technical specifications, or repair or modification carried out by anyone other than MSA 4X4 Accessories Pty Ltd. No charges will be accepted for external labour or materials. MSA 4X4 Accessories 5-year warranty does not cover any scratches, cracks or chips.

MSA 4X4 Accessories products are designed for lifestyle applications. Due to the harshness of the mining environment, MSA 4X4 Accessories products used in mining applications that may be operating outside of their environmental and technical specifications, are therefore excluded from the 5-Year Warranty. MSA 4X4 Accessories products used in mining applications are warranted for up to 1 year.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Maintenance of MSA 4X4 Towing Mirrors:

To help maintain the MSA 4X4 Towing Mirrors warranty, ensure that no harsh chemicals are used when washing the mirrors. Truck wash is NOT advisable. When a vehicle, fitted with MSA 4X4 Towing Mirrors, travels through coastal areas it is important to clean the mirrors regularly, as salt can damage the power coated finish. MSA 4X4 recommends using a soft sponge and a regular car washing liquid diluted with water, for cleaning. Rinse well and dry with a soft towel or microfibre cloth.



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4X4 ACCESSORIES

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